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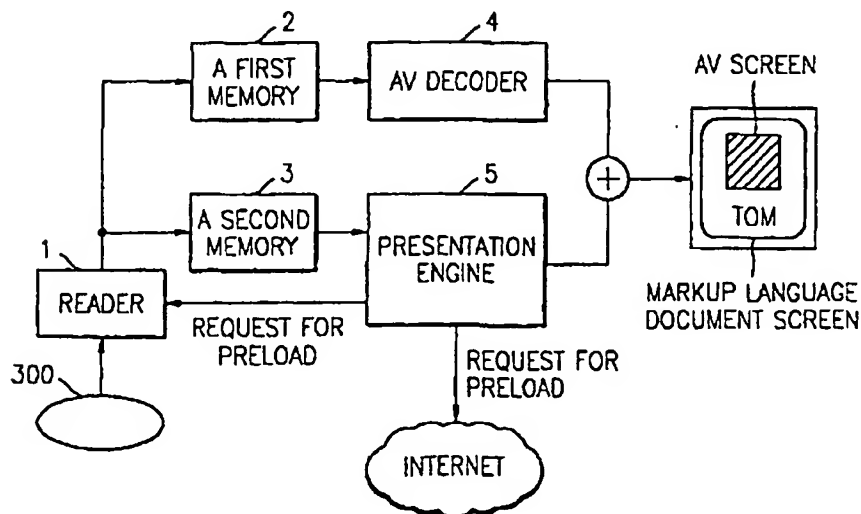
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(54) Information storage medium containing preload information, apparatus and method for reproducing therefor

(57) An information storage medium which contains preload information, a reproducing apparatus and a reproducing method are provided. The information storage medium includes: AV data which includes audio/video data; and a markup language document for displaying the AV data which is decoded and reproduced and for including a preload information that orders a repro-

ducing apparatus to read a file to be preloaded and to store it into a memory. The information storage medium, which contains the markup language document preventing the moving pictures from being interrupted in case the AV data recorded in the DVD is reproduced and displayed through the markup language document, and a reproducing apparatus and a reproducing method are provided.

FIG. 3



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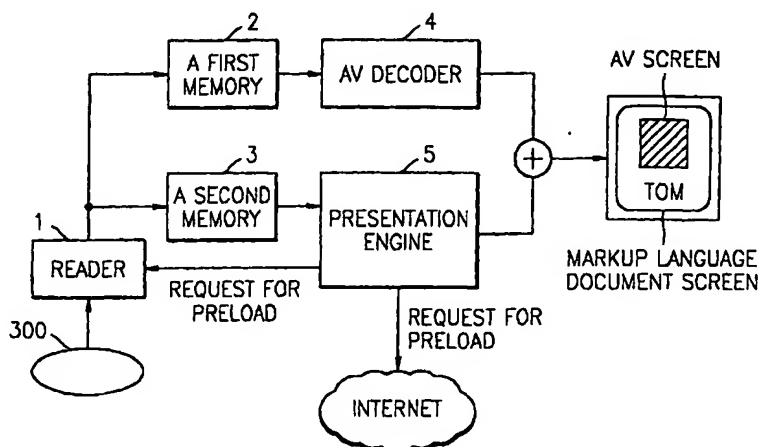
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(54) **Information storage medium containing preload information, apparatus and method for reproducing therefor**

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FIG. 3



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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 20 July 2004	Examiner Hermes, L
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

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Application Number
EP 02 25 4110

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 20 July 2004	Examiner Hermes, L
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date O : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 02 25 4110

DOCUMENTS CONSIDERED TO BE RELEVANT			
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Place of search The Hague		Date of completion of the search 20 July 2004	Examiner Hermes, L
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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Application Number
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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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LACK OF UNITY OF INVENTION
SHEET B

Application Number

EP 02 25 4110

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1, 15, and 22 with dependent claims 2 to 14, 16 to 21, and 23 to 28

Method (claims 15 to 21), apparatus (claims 22 to 28), and storage medium (claims 1 to 14) for reproducing audio/video AV data recorded on an information storage medium, the storage medium also comprising a markup language document that includes preload information and discard information, the method comprising the steps of interpreting the preload information, invoking a file to be preloaded based on the preload information, storing the file to a cache memory, reading the AV data and storing it in a buffer memory, reading the AV data and the file to be preloaded from the buffer memory and the cache memory, respectively, displaying the decoded and reproduced AV data and the file to be preloaded based on the markup language document, interpreting the discard information, and requesting the cache to discard files to be discarded.

2. claim: 29 and 30

Methods for preparing (claim 30) and performing (claim 29) a preloading, the method for performing the preloading comprising the steps of identifying the speed at which a file to be preloaded is read, identifying the condition that enables the buffering to be performed in such a way that relevant AV data can be reproduced seamlessly, and performing the preloading at the time identified to be the optimized condition, and the method for preparing the preloading comprising the steps of determining the above-mentioned optimized condition and recording source codes for performing the preloading at the time which is identified to be the optimized condition.

3. claims: 31-35

Method for managing a memory for preloading, the method comprising recording a memory management table containing the status information of a file to be preloaded, and discarding the file to be preloaded based on its status information.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 25 4110

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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20-07-2004

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82